

**U.S. Department of Energy  
National Nuclear Security Administration**

**Implementation Assessment  
of the  
Pantex Site Office  
Safety System Oversight Program**

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**Assessment performed by**

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**Approved by:** \_\_\_\_\_ **Date** \_\_\_\_\_  
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### **Executive Summary**

The National Nuclear Security Administration (NNSA) Pantex Site Office (PXSO) is satisfactorily implementing the Safety System Oversight (SSO) functions as described in DOE M 426.1-1A, Federal Technical Capability Panel Manual. PXSO has procedures and processes in place that have established SSO functions and responsibilities and qualifications for those positions within the Office of the Assistant Manager for Nuclear Engineering. PXSO has designated four positions that require SSO qualification. Two people are currently qualified and two are working to complete that process. Their progress is routinely tracked by the PXSO training office and reported to management.

### **Noteworthy Practices**

SSO engineers have established excellent working relationships with their contractor counterparts.

The development and consistent use of the *Position Analysis Procedure* assures that general technical baseline (GTB) and functional area (FA) qualification standards in technical areas are linked to individual job descriptions.

### **Findings**

The review team identified no findings.

### **Observations**

The review team identified several observations that should be considered for potential program improvements. These are discussed in the applicable sections of the report.

### **Scope and Methodology**

The team members described on page two of this report conducted the review. Criteria Review and Approach Documents (CRADs) prepared by the Federal Technical Capability Panel were used to perform the assessment (attachment A). Management (PXSO and contractor) and individuals qualifying in the SSO program were interviewed and appropriate training records and Site Office procedures were reviewed to perform the assessment. The personnel interviewed and documents reviewed are described on the Form 1's for each performance objective. That information is on file within the Office of the Assistant Manager for Oversight and Assessment, PXSO. The assessment was performed November 9-10, 2004.

### **Results**

The results of the assessment are documented below following the program objectives contained in the SSO CRADs.

#### **Program (PGM)**

*PGM 1. An effective SSO Program is established by the Field Element Manager to apply engineering expertise to maintain safety system configuration and to assess system condition and effectiveness of safety management program implementation.*

The systems engineering staff is identified within the technical qualification program (TQP) by discipline e.g., mechanical system engineer, electrical system engineer, and fire protection engineer. Qualification standards are issued for each, based on those disciplines. Qualification status is tracked on the TQP progress matrix that is issued monthly to the PXSO managers and the Service Center. The requirement to track and report on TQP qualification progress is specified in PXSO procedure 102.1.0, "PXSO Training Procedure". All PXSO SSO engineers are tracked and are either qualified or on schedule to become qualified within the specified time frame.

The PXSO functions, responsibilities and authorities manual (FRAM), paragraph 5.d (4) identifies the systems engineering oversight responsibility lies within the office of the Assistant Manager for Nuclear Engineering (AMNE). Those responsibilities include oversight of the M&O contractor system-engineering program and oversight of safety management systems (e.g., system, structure and component (SSC) operation, maintenance and design) as well as identification of pertinent general design criteria for new or modified SSCs. The SSO program roles and responsibilities are further established through an AMNE internal operating procedure. That internal operating procedure (IOP) specifies the SSO function is within the TQP and training and qualification requirements will be established by system engineering qualification standards. The responsibilities for PXSO safety systems engineers as described in the IOP, and are consistent with those described in DOE M 426.1-1A, Chapter III, Section 1, paragraph 2.a.

The SSO qualification standard (electrical and mechanical) requires the candidate have a minimum of a BS in engineering and the required experience is identified in the position description and the applicable knowledge, skills and abilities description. The qualification standard includes general technical baseline and functional area qualification requirements. Site specific criteria have been established and appear to adequately cover the areas of knowledge and ability necessary for an effective system engineer e.g., knowledge of applicable safety systems, skills in performing assessments, knowledge of safety bases documents, etc. It was noted the qualification standards were established prior to the availability of the generic safety system engineer standard. As a result, the existing qualification standards should be reviewed and updated as needed to consider recommended competencies from the generic standard e.g., work control processes. The applicable PXSO manager (the AMNE) is held accountable for completing system engineer training and qualification objectives through that manager's annual performance plan.

The Pantex Plant systems and equipment discussed in the site, facility and program specific documented safety analyses (DSA's) are currently identified in a BWXT document that is maintained under change control (CMD-006). That document identifies vital safety systems as a subset. Vital safety systems are active engineered systems credited by the DSA and those additional active engineered systems considered important for nuclear explosive operations safety. A PXSO systems engineer has been assigned to each of the Pantex vital safety systems. However, the PXSO list of cognizant engineers is not maintained as a record or transmitted formally to the contractor.

## Observations:

- 1) PXSO safety system qualification standards were established prior to the availability of the generic safety system engineer standard. As a result, the existing qualification standards should be reviewed and updated as needed to consider recommended competencies from the generic standard e.g., work control processes.
- 2) The AMNE should consider formally documenting the assignment of system engineers to vital safety systems and transmitting that information to the contractor.

## Training and Qualification (TQ)

*TQ 1. SSO personnel and supervisors with responsibilities for SSO personnel are appropriately trained and qualified, or are in the process of achieving qualification.*

The SSO manager is senior technical safety manager (STSM) qualified as required and is identified in the TQP. SSO team lead qualifications/re-qualifications status is tracked as required by PXSO procedure 102.1.0, *PXSO Training Procedure*. Qualification standards and qualification cards (i.e., Section 3.5, Facility/Site Specific Competencies) for the SSO staff and lead are developed. The process for documenting Facility/Site specific qualification standards and qualification cards is implemented for safety systems engineering staff to meet, at a minimum, the SSO knowledge, skills, and abilities specified in the *Federal Technical Capability Manual*.

SSO staff, lead and manager are identified within the TQP progress matrix are listed by functional areas (i.e., Electrical Systems, Fire Protection, Mechanical Systems, and Senior Technical Safety Manager) and include qualification standards and cards for each of the disciplines. PXSO Procedure 102.1.0, *PXSO Training Procedure*, clearly describes that duties/task analysis is used by PXSO as an integrated step in the position description process. The *Position Analysis Procedure* is objective evidence that demonstrates GTB and FA qualification standards in technical areas are linked to each individual job description for SSO staff and supervisors.

## Management (MG)

*MG 1. SSO Supervisors effectively perform their SSO program responsibilities.*

Site-specific qualification standards developed are consistent with the criteria for safety systems and safety management programs. The SSO lead responsible for the SSO Program performs all SSO program responsibilities required in Section 5, IOP-AMNE-02, Safety Systems Oversight Program. SSO supervision recognizes SSO personnel are a key technical resource and are identified in the TQP. Records reviewed indicate that the SSO supervisor establishes and reviews qualification schedules and progress, which are tracked, and a status is provided as required by PXSO procedure 102.1.0, *PXSO Training Procedure*.

Pantex SSO staff has either completed or made substantive progress toward completing task training and qualification requirements. Clearly, the AMNE and SSO Team Lead facilitated qualification by ensuring that sufficient time, task training schedules, and qualification progress was a priority. The AMNE is responsible for the SSO Program described in Section 5, IOP-AMNE-02, Safety Systems Oversight Program. The SSO qualification cards and training records reviewed fully demonstrate that completing training and qualification tasks required substantial investment of time. Actual SSO qualification completion or progress, expressed as % complete, is listed on the TQP progress matrix. Individual Performance Plans (IPP) reviewed included and measured performance elements for SSO major duty/task areas.

Based upon PXSO Procedure 102.1.0, PXSO Training Procedure and Pantex Site Office Internal Operating Procedure IOP-AMNE-02 reviews, interviews conducted, training records/qualification cards reviewed, and the results of other SSO Program Assessments CRADS evaluated during team's assessment, it is evident that SSO Supervisors recognize and describe processes for periodic evaluation to determine effectiveness of their SSO Program.

#### Oversight Performance (OP)

*OP 1. Collectively, SSO personnel provide oversight of the Contractor's System Engineering Program.*

The review indicated that the SSO personnel effectively oversee the contractors System Engineering Program. Several examples of communication between the groups were observed including: one on one communication between the system engineers at BWXT and PXSO; weekly meeting between the PXSO and BWXT system engineering group leaders (with agendas for each); special purpose meetings (e.g., the reviewer attended a tracking/trending meeting between the groups initiated by PXSO). It was evident that the SSO personnel periodically assess the implementation of the BWXT system-engineering program, however corrective actions from these reports do not appear to be put into a tracking/monitoring system to track closure.

*OP 2. SSO personnel are knowledgeable and familiar with assigned safety systems and/or programs.*

Due to the impacts on system engineering (SE) resources on both the contractor and the federal sides due to supporting the technical safety requirements (TSR) IIP activities, to date most of the attention paid to systems has been reactive to problems versus proactive (i.e. gathering data that could indicate future problems). As an example, it does not appear that the SSO personnel sample surveillance reports on each system. Where operability of a system is in question, it appears that the contractor and the SSO personnel work expeditiously to create an operability evaluation to determine if a system's safety functionality is impaired and/or justify continued reliance on the system. The contractor

has just begun a tracking and trending program and is intending to send a quarterly tracking/trending report to PXSO. The quality and usefulness of this data is currently being evaluated by the SSO during the on-going SE Program Review.

The review team did not see any evidence of the SSO personnel seeking interface with external organizations for system performance insights, however, it is apparent that external interface occurs. For example, the DNFSB played a large role in the establishment of the SE program and continues to provide input to the SSO personnel and contractor system engineers. Also, the SSO personnel are knowledgeable of the codes/standards regarding the assigned systems (e.g., NFPA, IEEE, 10CFR835, etc.) and know where and who to call with questions/interpretations.

Several examples of assessments performed by SSO personnel were reviewed. The SE program has yet to evolve to the point where these evaluations are focused on equipment configuration and material condition but are rather still primarily focused on the program implementation. This is due in part to problems establishing the initial configuration management of the safety system. At this point, all procurements of parts for and modification and maintenance on any portion of a safety system is evaluated by the systems engineer for its potential effect on the safety performance of the system. This is necessary since the exact configuration of these systems was not maintained in the past. Although time consuming, it is thought that over time, the systems will be evaluated to a degree sufficient to manage the configuration of those portions of the system that perform a safety function. Since complete system walkdowns and updating of the drawing sets is only partially complete, the ability of SSO personnel to evaluate whether equipment configuration is adequate may be difficult.

It appears the intent is to build the system configuration up over time (i.e., piecemeal while evaluating each procurement request, modification, repair, etc.) versus establishing the system configuration all at once. This appears to be due to the funding limitations and lack of personnel resources on the contractor side. The concern with this approach is that it may be several years until NNSA can be confident that the contractor has all the vital safety systems under formal configuration control.

SSO personnel evaluate information sent from the contractor SE group that relates to tracking/trending data (e.g. Quarterly Tracking/Trending Report). The review team attended a meeting SSO personnel had with contractor on this subject. It appears that this program is just starting with the first quarterly report coming over to PXSO in the near future. The SSO personnel are actively involved in resolution of issues relating to systems under their purview. Interfaces between the FR group and the AB group with the SSO group appear reasonably effective in engaging the SSO personnel when question/issues arise.

The PXSO FRAM, and the AMNE IOP for the system-engineering program, recognizes the responsibility for the SSO's to provide support to other Site organizations. That support focuses primarily on the PXSO Facility Representatives, Authorization Basis Staff and the Federal Project Directors. The principal support of Federal Project Directors is for design reviews. The SSO IOP contains a design review checklist and

comments are formally transmitted by the SSO organization to the applicable PXSO project director. PXSO internal procedures require applicable SME's be solicited for design reviews but do not specifically identify the need to solicit the system engineering organization input. However, it appears SSO's are being appropriately involved in project design review activities. System engineers also participate as Safety Basis Review Team members for DSA reviews and have been proactive in evaluating the effectiveness of TSR control implementation as a precursor to contractor readiness assessment activities.

The SSO organization formally documents assessment results and transmits those results to the contractor for action. Based on a review of a sampling of SSO reports, the PXSO system engineers establish adequate and appropriate review criteria and base findings/conclusions on established DOE or consensus standards or contractor requirements. SSO assessments were conducted using standard techniques including system walkdowns and field verifications, procedure and drawing reviews, and interviews with operators, mechanics, engineers and other appropriate SMEs. Findings and observations were documented in formal assessments reports and transmitted to the contractor for corrective action. However, corrective tracking by the contractor is not routinely shared with PXSO.

Currently, SSO issues are identified to the AMNE by virtue of assessment reports signed out from that office. More urgent issues are communicated directly from either the SSO subject matter expert (SME) or the SSO lead to the AMNE and to facility representatives (FR's) via the daily morning staff call. SSO SMS's also utilize a written weekly report to the AMNE (and others) to document current issues and status of long-term items. The Site Office Manager and the Facility Representatives are not normally on distribution for the SSO assessment reports.

Currently the SSO lead is the only SSO person on the Site Office qualifying officials (QO) list. The SSO lead performs the function of QO for safety system related competencies. No formal mechanism currently exists to keep SSO personnel informed about project status involving safety related systems however, requests to SSO personnel for design reviews are being accomplished by project personnel. Safety system degradation or status with respect to TSRs is communicated daily to Management via the daily operations report produced by the PXSO Duty Officer. SSO personnel have not established routine safety system performance metrics. This issue was identified by SSO personnel in an FY05 report and actions are underway to receive and review contractor's metrics.

The interface between the SSO group and the FRs was found to be satisfactory. Where FRs require support for troubleshooting, investigations, root cause analyses, etc. in areas of SSO expertise, the support has been good.

Observations:



1. Corrective actions from SSO oversight reports are not being placed in a tracking/monitoring system to ensure acceptable closure of the deficiency. Additionally, corrective tracking by the contractor is not routinely shared with PXSO.
2. Appendix E – List of Applicable Directives from Part III Section J of the Pantex M&O contract does not contain a directive or standard for configuration management requirements or best practices.
3. The Site Manager, AMOA and Supervisor Facility Representative should be included on SE assessment report distribution.

**Attachment A**  
**Safety System Oversight (SSO) Program**  
**Implementation Assessment**  
**Criteria and Review Approach Documents (CRADs)**

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**Revision 0**

**PROGRAM (PGM)**

**OBJECTIVE**

**PGM.1** An effective SSO Program is established by the Field Element Manager to apply engineering expertise to maintain safety system configuration and to assess system condition and effectiveness of safety management program implementation.

**Criteria**

- PGM.1.1      The SSO Qualification Program is part of the Technical Qualification Program (DOE M 426.1-1A, Chapter III, Section 1, 2.b (1)).
- PGM.1.2      The SSO Program establishes appropriate training, qualification, and performance requirements for SSO personnel and the supervisors are held accountable for achieving them (DOE M 426.1-1A, Chapter III, Section 1, 2.b (2)).
- PGM.1.3      The safety systems and safety management programs included in the SSO Program align with those systems and programs identified in the applicable Documented Safety Analysis (DOE M 426.1-1A, Chapter III, Section 1, 4.c).
- PGM.1.4      Safety system oversight requirements are defined and implemented, for example, functions, responsibilities, and authorities of personnel assigned to perform safety system oversight and their interface/support of Facility Representatives are clearly defined, and SSO staffing needs are identified and there is a plan or process to ensure future staffing needs are met and maintained (DOE M 426.1-1A, Chapter III, Section 1, 2.b (3) & (4)).
- PGM.1.5      Affected DOE and contractor managers understand the SSO role and relationship to Facility Representatives and the contractor's cognizant System Engineers, and provide the necessary access and support (DOE M 426.1-1A, Chapter III, Section 1, 3.d).
- PGM.1.6      Qualifying Officials are assigned to sign site-specific Qualification Cards (DOE M 426.1-1A, Chapter III, Section 1, 2.b (6)).
- PGM.1.7      The SSO Program contains features to verify that SSO candidates possess the required level of knowledge and/or skills to perform assessments and investigations to confirm performance of safety systems in meeting

established safety and mission requirements (DOE M 426.1-1A, Chapter III, Section 1, 2.b (5)).

### Approach

**Record Review:** Review documentation (e.g., site technical qualification program documents, SSO Program Plan, SSO Program procedures, qualification cards and/or standards, internal memorandums, Documented Safety Analyses, etc.) which establish the SSO Program and describe its implementation to determine that the program is complete and comprehensive.

**Interviews:** Interview management personnel with responsibilities for implementing and executing the SSO program to determine if they are familiar with the role of SSO personnel relative to the Facility Representatives and the contractor's cognizant system engineers, if they provide adequate resources for training, qualification, future staffing, and performance of SSO personnel, and if they appropriately qualified to perform their assigned role in the SSO program. Interview qualifying officials to determine if they are familiar with their role and responsibility, they are currently qualified, and they are performing their assigned role.

**Field Observation:** Evaluate any process used by or directed by the Field Element Manager to determine the effectiveness of SSO Program Performance.

## TRAINING AND QUALIFICATION (TQ)

### OBJECTIVE

**TQ.1** SSO personnel and supervisors with responsibilities for SSO personnel are appropriately trained and qualified, or are in the process of achieving qualification.

### Criteria

- TQ.1.1 Supervisors with responsibilities for SSO personnel maintain Senior Technical Safety Manager (STSM) qualification (DOE M 426.1-1A, Chapter III, Section 1, 2.c (1)).
- TQ.1.2 Site-specific qualification standards and cards have been developed and a documented process is implemented to assure that SSO candidates meet, at a minimum, the SSO knowledge, skills, and abilities specified in the *Federal Technical Capability Manual* DDOE 426.1-1A, Chapter III, Section 1, 5.a & 5.b)
- TQ.1.3 All SSO personnel have completed or are completing the General Technical Base Qualification Standard (DOE-STD-1146-2001) and one or more Functional Area Qualification Standard(s) in a technical area linked to their individual job descriptions (DOE M 426.1-1A, Chapter III, Section 1, 4.a).
- TQ.1.4 All SSO personnel have completed or are completing the site-specific qualification standard associated with assigned safety systems (DOE M 426.1-1A, Chapter III, Section 1, 4.a).
- TQ.1.5 SSO Supervisors have established methods to assign initial qualification dates, track progress toward qualification, and ensure retraining/requalification occurs as required for each SSO candidate in the qualification process (DOE M 426.1-1A, Chapter III, Section 1, 2.c (4) through (6)).

### Approach

**Record Review:** Review qualification records to establish that supervisors and managers of SSO are qualified as an STSM and that SSO personnel are trained and qualified.

Review qualification and requalification schedules, staffing plans, training plans, travel funding, etc. to determine that sufficient resources are provided for training, retraining, qualifying, and requalifying SSO personnel.

**Interviews:** Interview supervisors, training coordinators, SSO personnel, and budget personnel to establish that training and qualification plans and schedules are being executed as planned and that sufficient resources are provided to meet the schedules.

**Field Observation:** Observe activities associated with the qualification process, such as qualification boards, exams, walk throughs to determine that the training and qualification process is implemented and functioning effectively.

## **MANAGEMENT (MG)**

### **OBJECTIVE**

**MG.1** SSO Supervisors effectively perform their SSO program responsibilities.

#### **Criteria**

- MG.1.1 Site-specific SSO qualification standards and cards are developed (DOE M 426.1-1A, Chapter III, Section 1, 2.c (2)).
- MG.1.2 Supervisors have identified and approved SSO candidate selection (DOE M 426.1-1A, Chapter III, Section 1, 2.c (3)).
- MG.1.3 Supervisors of SSO personnel have established SSO personnel qualification schedules and are tracking progress (DOE M 426.1-1A, Chapter III, Section 1, 2.c (4)).
- MG.1.4 Supervisors facilitate SSO qualification (e.g., ensure sufficient time and training are provided to complete qualification tasks) (DOE M 426.1-1A, Chapter III, Section 1, 2.c (5)).
- MG.1.5 Supervisors ensure SSO personnel are trained and qualified to perform assigned duties (DOE M 426.1-1A, Chapter III, Section 1, 2.c (6)).
- MG.1.6 SSO responsibilities are included and measured in Individual Performance Plans (DOE M 426.1-1A, Chapter III, Section 1, 2.c (7)).
- MG.1.7 Ensure SSO qualifications are maintained current by training and assignments planned in Individual Development Plans (DOE M 426.1-1A, Chapter III, Section 1, 2.c (8)).
- MG.1.8 SSO Supervisors periodically evaluate program effectiveness and implement corrective actions in a timely manner (DOE M 426.1-1A, Chapter III, Section 1, 2.c (9)).

#### **Approach**

**Record Review:** Review qualification cards, Individual Performance Plans, and other SSO program documents and procedures to establish that managers and supervisors are effectively performing their responsibilities as defined in the SSO program. Review other documentation used by supervisors to establish SSO program effectiveness and implementation of corrective actions.

**Interviews:** Interview supervisors and managers to establish that they are familiar with their assigned roles, they perform their assigned duties, monitor the effectiveness of the SSO program and ensure any identified corrective actions are implemented.

**Field Observation:** Observe any activities associated with SSO program effectiveness evaluations and/or corrective action implementation.

## **OVERSIGHT PERFORMANCE (OP)**

### **OBJECTIVE**

**OP.1** Collectively, SSO personnel provide oversight of the Contractors' System Engineer Program.

### **Criteria**

- OP.1.1 Oversight performed by SSO personnel establishes that the contractor System Engineer Program is effectively implemented with goals, objectives, and performance measures (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).
- OP.1.2 SSO personnel maintain communication with the contractor's cognizant System Engineer (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).
- OP.1.3 SSO personnel monitor performance of the contractor's cognizant System Engineer Program (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).
- OP.1.4 SSO personnel attend selected contractor meetings with Facility Representatives and contractor personnel responsible for system performance (e.g., cognizant System Engineers, design authorities, and program managers) (DOE M 426.1-1A, Chapter III, Section 1, 2.a (3)).

### **Approach**

**Record Review:** Review oversight documentation, such as SSO assessment reports, SSO walk throughs, correspondence, SSO activity records or logs, corrective action documents, etc. to establish that SSO personnel are overseeing implementation and execution of the contractor system engineer program. Review the contractor's system engineer program to determine whether there are any program weaknesses or deficiencies that have not been identified by SSO personnel.

**Interviews:** Interview SSO personnel, Facility Representatives, and contractor system engineers to establish the level of interface between SSO personnel and the contractor's cognizant system engineers.

**Field Observation:** Observe any oversight activities of the contractor's system engineer program performed by SSO personnel.

## OBJECTIVE

**OP.2** SSO personnel are knowledgeable and familiar with assigned safety systems and/or programs.

### Criteria

- OP.2.1 A qualified SSO is, in fact, knowledgeable of the system status, performance, maintenance, operations, design, and vulnerabilities of their assigned systems or programs. This is evidenced by:
  - OP.2.1.1 SSO personnel regularly and routinely review periodic system health/status reports (DOE M 426.1-1A, Chapter III, Section 1, 2.a (2)).
  - OP.2.1.2 SSO personnel review test results, investigation reports, root cause analyses, etc (DOE M 426.1-1A, Chapter III, Section 1, 2.a (2)).
  - OP.2.1.3 SSO personnel interface with external organizations that can provide insights on performance (DOE M 426.1-1A, Chapter III, Section 1, 2.a (2)).
  - OP.2.1.4 SSO personnel perform assessments, periodic evaluations of equipment configuration and material condition and safety management program implementation (DOE M 426.1-1A, Chapter III, Section 1, 2.a (3)).
  - OP.2.1.5 SSO personnel evaluate the effects of aging on system equipment and components, the adequacy of work control and change control processes, and consider the appropriateness of system maintenance and surveillance activities with respect to reliable performance of safety function(s) (DOE M 426.1-1A, Chapter III, Section 1, 2.a (3)).
  - OP.2.1.6 SSO personnel identify technical issues and participate actively in the resolution of the issues.
- OP.2.2 Safety systems and safety management programs have established goals, objectives, and performance measures
- OP.2.3 SSO personnel perform evaluations of contractor troubleshooting, investigations, root cause evaluations, and selection and implementation of corrective actions, in conjunction with Facility Representatives (DOE M 426.1-1A, Chapter III, Section 1, 2.a (4)).
- OP.2.4 SSO personnel provide support to other Federal employees, as appropriate. (DOE M 426.1-1A, Chapter III, Section 1, 2.a (5))
- OP.2.5 SSO personnel assess contractor compliance with relevant DOE regulations, industry standards, contract requirements, safety basis requirements, and other system requirements (DOE M 426.1-1A, Chapter III, Section 1, 2.a (6)).

- OP.2.6 SSO personnel confirm configuration documentation, procedures, and other sources of controlling information are current and accurate (DOE M 426.1-1A, Chapter III, Section 1, 2.a (7)).
- OP.2.7 SSO personnel report potential or emergent hazards immediately to DOE line management and Facility Representatives (DOE M 426.1-1A, Chapter III, Section 1, 2.a (8)).
- OP.2.8 SSO personnel stop tasks, if required, to prevent imminent impact to the health and safety of workers and the public, to protect the environment, or to protect the facility and equipment and immediately notify the on-duty or on-call Facility Representative (DOE M 426.1-1A, Chapter III, Section 1, 2.a (8)).
- OP.2.9 SSO personnel serve, when assigned, as qualifying officials in the development or revision of Functional Area Qualification Standards, mentor assigned backups, and qualify other candidates to the Functional Area Qualifications Standards needed to achieve Safety System oversight qualification (DOE M 426.1-1A, Chapter III, Section 1, 2.a (9)).
- OP.2.10 SSO personnel maintain cognizance of the appropriate funding and resources to maintain and improve safety systems (DOE M 426.1-1A, Chapter III, Section 1, 2.a (10)).
- OP.2.11 Methods have been established for SSO personnel to routinely communicate system/program performance information and issues with STSMs and the Field Office Manager (DOE M 426.1-1A, Chapter III, Section 1, 2.a (1)).

### Approach

**Record Review:** Review oversight documentation, such as SSO assessment reports, SSO walk throughs, correspondence, SSO activity records or logs, corrective action documents, etc. to establish that SSO personnel are performing required oversight. Review contract requirements and their flow down through the contract to the safety systems and safety management programs to establish the effectiveness of SSO personnel oversight that the contractor complies with all requirements relative to safety systems and programs. Review a sample of the safety system health reports, safety system test reports, safety system investigation reports, safety system root cause analyses, etc. to determine the effectiveness of SSO personnel knowledge and familiarity with this information.

**Interviews:** Interview SSO personnel to determine their knowledge of and familiarity with assigned safety systems and safety management programs, and the reports that the contractor may generate in relation to the systems and programs.

**Field Observation:** Observe SSO personnel walk downs and other activities in the field to establish the level of SSO personnel knowledge and familiarity of safety systems.